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NEW HAMPSHIRE
AGRICULTURAL EXPERIMENT STATION
DEPARTMENT OF CHEMISTRY

THE FERTILIZER INSPECTION FOR 1911

MADE FOR THE
STATE BOARD OF AGRICULTURE

BY B. E. CURRY AND T. O. SMITH

NEW HAMPSHIRE COLLEGE
OF
AGRICULTURE AND MECHANIC ARTS
DURHAM, N. H.

NEW HAMPSHIRE COLLEGE OF AGRICULTURE AND THE MECHANIC ARTS.

NEW HAMPSHIRE AGRICULTURAL EXPERIMENT STATION

DURHAM, N. H.

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The bulletins of the Experiment Station are published at irregular intervals and are sent *free* to all residents of New Hampshire requesting them.

INSPECTION OF FERTILIZERS FOR 1911

The samples of fertilizer for the 1911 inspection, as usual, were collected under the direction of the State Board of Agriculture and turned over to the State Agricultural Experiment Station for analysis. Aside from duplicates 113 samples have been received and analyzed. Of these, fifteen represent unmixed raw materials including ground bone and tankage.

The fertilizers, in general, met their guarantee. In a few instances marked shortages have occurred in some one element, but against these in most cases have been an excess of some other constituent. The consumer now is concerned more about the nature of the guarantee rather than about the deficiencies. The manufacturers are anxious to have all goods meet the guarantee. Any notable deviation is generally due to accident or mistake.

The large number of brands offered for sale give the consumer considerable latitude in the choice of goods. The manufacturers are advocating the use of the better grades of fertilizers. This is a step in the right direction and should be taken advantage of by the consumer. With a given sum of money more plant food may be purchased in the form of high-grade fertilizers.

Messrs. J. E. Robinson and D. B. Keyes have assisted in the preparation of the following analytical results.

The samples on which these results have been determined will be kept for three months after the distribution of this report.

Composition of Commercial Fertilizers Sampled and Analyzed in 1911.

MANUFACTURER AND BRAND.	NITROGEN.				PHOSPHORIC ACID.							POTASH.	
			Total.				Available.			Total.			
	Inorganic.	Organic.	Found.	Guaranteed.	Soluble.	Reverted.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.
THE AMERICAN AGRICULTURAL CHEMICAL CO. New York, N. Y., and other places.													
Bradley's Complete Manure for Top-Dressing Grass and Grain	4.77	.52	5.29	4.94	3.77	1.43	5.20	5.00	1.10	6.30	6.00	3.10	2.50
Bradley's Potato Manure	1.82	.77	2.59	2.47	4.32	1.79	6.11	6.00	2.36	8.47	7.00	5.58	5.00
Bradley's X L Super-Phosphate of Lime	1.62	.91	2.53	2.47	7.13	2.97	10.10	9.00	1.70	11.80	10.00	2.44	2.00
Bradley's Seeding-Down Manure	1.52	1.08	2.60	2.47	8.24	.99	9.23	9.00	1.30	10.53	10.00	2.75	2.00
Bradley's Potato Fertilizer	1.45	.66	2.11	2.06	6.00	2.58	8.58	8.00	1.63	10.21	9.00	3.12	3.00
Bradley's Corn Phosphate	1.60	.63	2.23	2.06	5.84	2.20	8.04	8.00	1.85	9.89	9.00	1.60	1.50
Bradley's Eclipse Phosphate for all Crops	.34	.76	1.10	1.03	6.78	1.65	8.43	8.00	2.29	10.72	9.00	2.53	2.00
Bradley's Complete Manure with 10% Potash	2.11	1.22	3.33	3.29	4.49	1.54	6.03	6.00	2.69	8.72	7.00	10.00	10.00
Bradley's Complete Manure for Potatoes and Vegetables	1.77	1.38	3.15	3.29	7.58	1.40	8.98	8.00	2.02	11.00	9.00	6.95	7.00
Darling's Potato Manure	1.81	.69	2.50	2.00	6.74	1.14	7.88	6.00	1.82	9.70	7.00	4.86	5.00
Darling's Farm Favorite	1.48	.58	2.06	2.06	6.36	1.71	8.07	8.00	2.47	10.54	9.00	3.25	3.00
Cleveland Fertilizer for all Crops	.35	.75	1.10	1.03	5.20	2.64	7.84	8.00	2.39	10.23	9.00	1.91	2.00
Cumberland Super-Phosphate	1.41	.94	2.35	2.06	6.94	1.71	8.65	8.00	1.75	10.40	9.00	2.17	1.50
Clark's Cove Bay State Fertilizer	1.33	.76	2.09	2.06	5.49	2.51	8.00	8.00	1.98	9.98	9.00	1.51	1.50
Quinnipiac Potato Phosphate	1.42	.66	2.08	2.06	5.64	2.41	8.05	8.00	2.10	10.15	9.00	3.25	3.00
Quinnipiac Corn Manure	1.05	1.05	2.10	2.06	5.70	2.52	8.22	8.00	2.25	10.47	9.00	1.51	1.50
Pacific Potato Special	1.41	.74	2.15	2.06	6.09	2.06	8.15	8.00	2.20	10.35	9.00	3.15	3.00
Soluble Pacific Guano	1.06	1.00	2.06	2.06	5.97	2.10	8.07	8.00	2.27	10.34	9.00	1.75	1.50
High Grade Fertilizer with 10% Potash	1.24	1.35	2.59	2.47	5.27	1.64	6.91	6.00	1.56	8.47	7.00	10.00	10.00
Special Vegetable Guano	2.19	1.18	3.37	3.29	7.50	.71	8.21	8.00	1.95	10.16	9.00	6.83	7.00
Read's Potato Manure	1.45	1.15	2.60	2.47	4.49	2.36	6.85	6.00	2.36	9.21	7.00	11.00	10.00
Read's Farmer's Friend Super-Phosphate	.84	1.29	2.13	2.06	6.38	2.60	8.98	8.00	.99	9.97	9.00	3.10	3.00
Nitrate of Soda	15.30	.....	15.30	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....

THE AMERICAN AGRICULTURAL CHEMICAL CO., M. E. WHEELER & CO. BRANCH. Rutland Vt.													
Crocker's Ammoniated Corn Phosphate	1.11	1.21	2.32	2.06	7.01	1.89	8.90	8.00	1.80	10.70	9.00	1.65	1.50
Crocker's Potato, Hop and Tobacco Phosphate	1.00	1.10	2.10	2.06	6.26	1.95	8.21	8.00	1.90	10.11	9.00	3.24	3.00
Crocker's New Rival Ammoniated Super-Phosphate	.39	.70	1.09	1.03	6.01	1.99	8.00	8.00	1.97	9.97	9.00	2.10	2.00
PACKER'S UNION FERTILIZER BRANCH. Rutland, Vt.													
Packer's Union Animal Corn Fertilizer	1.43	.87	2.30	2.47	8.63	1.31	9.94	9.00	1.12	11.06	10.00	2.40	2.00
Packer's Union Potato Manure	1.23	1.02	2.25	2.06	8.37	.54	8.91	8.00	1.13	10.04	9.00	5.66	6.00
Packer's Union Universal Fertilizer	.29	.64	.93	.82	6.80	2.78	9.58	8.00	2.02	11.60	9.00	3.86	4.00
GREAT EASTERN NORTHERN BRANCH. Rutland, Vt.													
Great Eastern Potato Manure	1.44	.66	2.10	2.06	5.87	2.43	8.30	8.00	1.45	9.75	9.00	2.98	3.00
Great Eastern General Fertilizer	.32	.57	.89	.82	7.77	1.18	8.95	8.00	1.30	10.25	9.00	4.45	4.00
BOWKER FERTILIZER CO. Boston and New York.													
Bowker's Sure Crop Phosphate	.82	.42	1.24	.82	6.20	2.61	8.81	8.00	2.34	11.15	9.00	2.24	2.00
Bowker's Potash or Staple Phosphate	.72	.33	1.05	.82	4.00	4.70	8.70	8.00	2.12	10.82	9.00	3.88	3.00
Bowker's Potato and Vegetable Phosphate	.43	1.32	1.75	1.65	6.00	2.41	8.41	8.00	2.00	10.41	9.00	2.40	2.00
Bowker's Corn Phosphate	.84	.82	1.66	1.65	6.05	2.03	8.08	8.00	2.50	10.58	9.00	2.04	2.00
Bowker's Farm and Garden Phosphate	.83	.92	1.75	1.65	6.18	2.00	8.18	8.00	2.36	10.54	9.00	2.28	2.00
Bowker's Potato and Vegetable Fertilizer	1.24	1.39	2.63	2.47	7.86	.92	8.78	8.00	1.87	10.65	9.00	4.28	4.00
Bowker's Hill and Drill Phosphate	1.49	.93	2.42	2.47	6.55	2.74	9.29	9.00	2.52	11.81	10.00	2.28	2.00
Bowker's Lawn and Garden Dressing	2.66	.47	3.13	3.29	4.55	1.95	6.50	4.00	1.33	7.83	8.00	5.78	5.00
Bowker's Fresh Ground Bone	.....	.....	2.48	2.47	.....	.....	.....	.....	14.76	23.27	22.88	.....	.....
Stockbridge Special Complete Manure for Potatoes and Vegetables, etc	1.85	1.40	3.25	3.29	5.06	1.72	6.78	6.00	1.18	7.96	7.00	10.40	10.00
Stockbridge Special Complete Manure for Corn and all Grain Crops	1.95	1.36	3.31	3.29	8.51	1.51	10.02	10.00	1.53	11.55	11.00	7.70	7.00
Stockbridge Special Complete Manure for Top-Dressing and for Forcing	3.77	1.18	4.95	4.94	3.80	1.38	5.18	4.00	1.07	6.25	6.00	6.36	6.00
ARMOUR FERTILIZER WORKS. Baltimore, Md.													
Complete Manure	1.94	1.47	3.41	3.29	5.00	1.20	6.20	6.00	1.42	7.62	6.50	10.05	10.00

Composition of Commercial Fertilizers Sampled and Analyzed in 1911.—Continued.

MANUFACTURER AND BRAND.	NITROGEN.				PHOSPHORIC ACID.							POTASH.	
			Total.				Available.			Total.			
	Inorganic.	Organic.	Found.	Guaranteed.	Soluble.	Reverted.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.
ATLANTIC FERTILIZER CO.													
Acid Phosphate	.....	.....	.....	.....	12.99	.....	15.55	.....	.92	16.47	14.50	.....	.....
THE BUFFALO FERTILIZER CO. Buffalo, N. Y.													
Buffalo Ideal for Wheat and Corn	1.51	.29	1.80	1.60	8.00	1.24	9.24	9.00	1.05	10.29	10.00	5.22	5.00
Celery and Potato Special	.87	.83	1.64	1.64	5.39	2.61	8.00	8.00	1.87	9.87	9.00	10.55	10.00
Extra Phosphate and Potash	.....	.....	.....	.....	7.37	1.93	9.30	10.00	1.50	10.80	11.00	7.58	8.00
Farmer's Choice	.81	.40	1.31	.80	6.52	1.55	8.07	8.00	1.73	9.80	9.00	5.18	5.00
Fish Guano	.41	.39	.80	.80	4.57	4.43	9.00	9.00	1.60	10.60	10.00	2.72	2.00
General Crop	.....	.....	.....	.....	4.96	3.92	8.88	9.00	1.22	10.10	10.00	3.03	3.00
High Grade Manure	2.43	.70	3.13	3.30	4.57	2.95	7.52	7.00	.92	8.44	8.00	10.40	10.00
New England Special	1.78	.41	2.19	1.60	6.60	2.15	8.75	9.00	1.00	9.75	10.00	7.18	5.00
THE COE-MORTIMER CO. New York City.													
E. Frank Coe's XXV Ammoniated Bone Phosphate	.40	.91	1.31	.80	8.55	1.85	10.40	8.50	1.65	12.05	8.50	2.80	1.50
E. Frank Coe's New England Corn and Potato Fertilizer	.59	.48	1.07	.80	5.87	2.25	8.12	7.50	1.22	9.34	8.50	3.34	3.00
E. Frank Coe's Famous Prize Grain and Grass Fertilizer	.....	.....	.....	.....	2.35	5.15	7.50	10.00	2.15	9.65	11.00	4.84	2.00
E. Frank Coe's Excelsior Potato Fertilizer	1.54	1.15	2.69	2.47	4.56	2.46	7.02	7.00	2.18	9.20	8.00	8.40	8.00
E. Frank Coe's Columbian Corn and Potato Fertilizer	.59	.68	1.27	1.23	8.59	1.36	9.85	8.50	2.40	12.25	9.50	2.71	2.50
E. Frank Coe's Celebrated Special Potato Fertilizer	.71	.95	1.66	1.65	6.37	2.23	8.60	8.00	1.60	10.20	9.00	5.22	4.00
E. Frank Coe's Corn and Potato Fertilizer	.63	.70	1.33	1.25	8.40	1.40	9.80	8.50	2.30	12.10	9.50	2.61	2.50

ESSEX FERTILIZER CO. Boston, Mass.													
Essex Complete Manure for Corn, Grain and Grass	1.23	1.91	3.14	3.28	4.54	2.01	6.55	6.00	.65	7.20	7.00	10.00	10.00
Essex Market Garden and Potato Manure	1.34	.70	2.04	2.00	7.02	1.79	8.81	8.00	1.97	10.78	9.00	5.65	5.00
Essex XXX Fish and Potash	.66	1.51	2.17	2.00	5.46	2.59	8.05	8.00	1.90	9.95	9.00	3.27	3.00
Essex Dry Ground Fish	.....	.....	9.40	7.50	.....	.....	.....	.....	2.75	11.06	11.00	.....	.....
Essex A1 Super-Phosphate	.25	1.13	1.38	1.25	5.82	1.24	7.06	7.00	1.21	8.27	8.00	2.21	2.00
THE GERMAN KAIL WORKS. Baltimore, Md.													
Muriate of Potash	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50.80	50.00
Nitrate of Soda	15.86	.....	15.86	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
LISTER'S AGRICULTURAL CHEMICAL WORKS. Newark, N. J.													
Lister's Success Fertilizer	.60	.71	1.31	1.23	6.10	2.94	9.04	9.00	1.39	10.43	10.00	3.12	2.00
Lister's Special Corn Fertilizer	.66	.42	1.08	1.23	6.97	1.43	8.40	8.00	2.07	10.47	9.00	3.05	3.00
Lister's Special Potato Fertilizer	1.06	.66	1.72	1.65	6.56	2.03	8.59	8.00	2.03	10.62	9.00	3.60	3.00
Lister's Grain and Grass Fertilizer	.....	.....	.....	.....	8.91	2.63	11.54	10.00	.73	12.27	10.00	2.28	2.00
Lister's High Grade Special for Spring Crops	.89	.67	1.66	1.65	6.14	1.20	7.34	8.00	1.68	9.02	9.00	10.35	10.00
MCQUESTERN & LEWIS. Manchester, N. H.													
Ground Bone	.....	.....	2.53	2.40	.....	.....	.....	.....	.....	24.65	23.42	.....	.....
NEW ENGLAND FERTILIZER CO. Boston, Mass.													
New England Corn Phosphate	.45	1.23	1.68	1.61	7.12	1.30	8.42	8.00	2.44	10.86	9.00	3.33	3.00
New England Corn and Grain Fertilizer	.15	1.11	1.66	1.23	7.11	1.06	8.17	7.00	1.69	9.86	8.00	3.16	2.00
New England Potato Grower	1.26	1.27	2.53	2.46	5.19	1.45	6.64	6.00	1.20	7.84	7.00	10.35	10.00
New England Super-Phosphate	1.11	1.36	2.47	2.46	6.03	2.28	8.31	8.00	.84	9.15	10.00	4.28	4.00
New England Potato Fertilizer	1.06	.61	1.67	1.64	5.36	1.89	7.25	7.00	.90	8.15	8.00	4.01	4.00
NITRATE AGENCIES CO. 24 Stone St., New York, N. Y.													
Nitrate of Soda	15.86	.....	15.86	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....

Composition of Commercial Fertilizers Sampled and Analyzed in 1911.—Continued.

MANUFACTURER AND BRAND.	NITROGEN.				PHOSPHORIC ACID.							POTASH.	
			Total.				Available.			Total.			
	Inorganic.	Organic.	Found.	Guaranteed.	Soluble.	Reverted.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.
PARMENTER & POLSEY FERTILIZER CO. Boston, Mass.													
Sulphate of Potash	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44.40	48.00
Nitrate of Soda	15.60	.....	15.60	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
Muriate of Potash	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51.00	50.00
Parmenter & Polsey Plymouth Rock Brand	1.22	1.25	2.47	2.46	6.43	1.96	8.39	8.00	.61	9.00	9.00	4.36	4.00
Parmenter & Polsey Potato Grower	1.21	1.38	2.59	2.46	6.07	.70	6.77	6.00	.53	7.30	7.00	10.55	10.00
Parmenter & Polsey Potato Fertilizer	.18	1.23	1.47	1.64	3.75	2.35	6.10	6.00	1.50	7.60	7.00	6.58	6.00
Parmenter & Polsey Ground Tankage	.....	.....	5.24	5.00	.....	.....	.....	.....	11.78	19.64	18.00	.....	.....
Parmenter & Polsey Acid Phosphate	.....	.....	.....	.....	9.90	3.04	12.94	12.00	.36	13.30	14.00	.....	.....
Parmenter & Polsey A and A Brand	2.94	1.13	4.07	4.10	6.67	.99	7.66	7.00	1.75	9.41	8.00	9.00	8.00
Parmenter & Polsey Grain Grower	.08	1.01	1.09	1.23	3.95	3.30	7.25	7.00	1.00	8.25	8.00	1.95	2.00
Sulphate of Ammonia	20.56	.....	20.56	20.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
PIEDMONT MT. GRAIN CO. Baltimore, Md.													
Bone Meal	.....	.....	4.25	2.29	.....	.....	.....	.....	12.33	22.46	21.00	.....	.....
THE ROGERS & HUBBARD CO. Middletown, Conn.													
Hubbard's "Bone Base" Fertilizer for Fruit, Grain and Grass	.79	1.64	2.43	2.20	5.00	4.20	9.20	6.50	6.95	16.15	16.00	13.95	12.00
Hubbard's "Bone Base" Soluble Potato Manure....[Manure	2.19	3.03	5.22	5.00	1.11	8.14	9.25	7.00	2.73	11.98	10.00	5.78	5.00
Hubbard's "Bone Base" Soluble Corn and General Crops	1.63	1.12	2.75	2.50	2.92	4.65	7.57	6.00	2.48	10.05	8.00	9.70	8.00
Hubbard's "Bone Base" Potato Phosphate	.87	.98	1.85	2.00	6.97	3.60	10.57	9.00	1.84	12.41	10.00	6.22	5.00
Hubbard's "Bone Base" Complete Phosphate	.72	.90	1.62	1.50	5.56	2.94	8.50	7.00	1.50	10.00	8.00	6.00	5.00
Hubbard's "Bone Base" Strictly Pure Fine Bone	.....	.....	3.70	2.85	.....	.....	9.65	.....	10.10	19.75	22.00	.....	.....

J. W. Sanborn. Pittsfield, N. H.													
Chemical Fertilizer for Corn and Potatoes	2.00	1.54	3.54	3.40	6.35	1.45	7.80	7.00	2.85	10.65	10.00	8.10	8.00
Chemical Fertilizer for use in Hill and Drill	1.52	.98	2.50	2.50	5.31	2.80	8.14	7.00	4.56	12.70	12.00	4.70	4.00
Chemical Fertilizer for Grass and Grain	4.31	.75	5.06	5.00	4.50	.82	5.32	4.00	.75	6.07	6.00	6.86	5.80
Frank Smith & Co. Lancaster, N. H.													
Seeding-Down Fertilizer	2.52	1.58	4.10	3.65	6.61	2.39	9.00	8.40	1.00	10.00	.....	8.95	10.00
Top-Dressing	5.65	.....	5.63	5.62	5.86	1.64	7.50	7.00	.92	8.42	.....	5.36	.65
Swift's Lowell Fertilizer Co. Boston, Mass.													
Nitrate of Soda	15.07	.....	15.07	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
Swift's Special Grass Mixture	2.33	1.67	4.00	4.10	6.35	.70	7.05	7.00	.55	8.60	8.00	5.83	6.00
Swift's Sterling Phosphate	.13	.79	.92	.82	6.92	2.21	8.13	8.00	1.90	10.03	9.00	3.89	4.00
Swift's Potato Grower	1.25	1.63	3.00	3.28	3.88	1.67	5.57	6.00	1.66	7.23	7.00	10.25	10.00
Swift's Special Corn and Vegetable Manure	1.73	1.56	3.29	3.28	6.95	1.34	8.29	8.00	.73	9.02	9.00	7.00	7.00
Swift's Lowell Potato Phosphate	1.15	1.33	2.48	2.46	8.41	1.40	9.81	8.00	.44	10.25	9.00	5.00	6.00
Swift's Lowell Animal Brand	1.11	1.37	2.48	2.46	5.48	2.60	8.08	8.00	1.00	9.08	9.00	4.16	4.00
Swift's Lowell Potato Manure	.47	1.18	1.65	1.64	5.89	1.61	7.50	7.00	.55	8.05	8.00	4.58	4.00
Swift's Lowell Bone Fertilizer	.13	1.51	1.64	1.64	7.35	1.48	8.83	8.00	2.00	10.83	9.00	3.12	3.00
Swift's Lowell Empire Brand	.05	1.17	1.22	1.25	4.12	3.06	7.18	7.00	1.47	8.65	8.00	2.03	2.00
Swift's Lowell Cereal Fertilizer	.11	.75	.86	.82	4.79	1.86	6.65	7.00	1.35	8.00	8.00	1.07	1.00
Swift's Lowell Ground Bone	.....	.....	3.35	2.40	.....	.....	.....	.....	11.89	22.50	23.00	.....	.....

630.72
N532
no.152-168

DATE DUE

A fine of Two Cents will be charged for each day the book is kept overtime.

FEB 1 1 '60			
DEC 7 '60			
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